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09/783,135	02/15/2001	Yang-lim Choi	Q60575	1486

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EXAMINER

HIRL, JOSEPH P

ART UNIT

PAPER NUMBER

2121

DATE MAILED: 07/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/783,135

**Applicant(s)**

CHOI ET AL.

**Examiner**

Joseph P. Hirl

**Art Unit**

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. Claims 1-14 are pending in this application.
2. The claims and only the claims form the metes and bounds of the invention. The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claim 2-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It appears that it is the intention of the Invention to transform a statistical distribution into multidimensional statistical distribution (joint density function) from which the joint density functions related to the dimensionality can be identified. Integrating across the space of the joint density function, one can arrive at the marginal density function and hence one begins to

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develop the grid. This process is not straightforward and would require extensive experimentation to replicate the invention. A grid is two-dimensional and yet the process is  $n$  dimensional. Fig. 2 illustrates a case where data joint distribution is not uniform but agglomerated even though the marginal distribution of the data is uniform in each dimension (specification, page 6, lines 1-3). Uniform conveys that the probability of a given event in a given space is equally likely. Fig. 2 does not convey much information and certainly since the marginal distribution comes about from the integration of the joint density function, the question of how uniformity is achieved is not sufficiently conveyed from the specification. Simply stated, the specification does not enable the invention.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

6. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Hill (U. S. Patent 5,713,016 referred to as **Hill**).

#### **Claim 1**

Hill anticipates (a) adaptively approximating feature vectors on the basis of statistical distribution of feature vector data in the feature vector data

Space (**Hill**, col 3, lines 29-59; Examiner's Note: adaptively is synonymous with fit).

## **Claim 2**

Hill anticipates (a-1) measuring the statistical distribution of the feature vector data in the feature vector data space (**Hill**, col 3, lines 29-59); (a-2) estimating marginal distribution of the feature vector data using the statistical distribution (**Hill**, col 4, lines 40-65; col 7, lines 43-67); (a-3) dividing the estimated marginal distribution into a plurality of grids in which a probability of disposing the feature vector data in each grid is uniform (**Hill**, col 8, lines 4-56); and (a-4) indexing the feature vector data space using the divided grids (**Hill**, col 8, lines 4-56; EN: if the statistics are developed using a joint density function of  $n$  variable configuration, each variable has an individual density function referred to as a marginal density function and the distribution function that they generate are the marginal distributions or  $z_j$  of Hill at col 8, line 67; the graphs of figure 5 illustrate tables or grids with relevance information and uniform disposition).

## **Conclusion**

7. Claims 1-14 are rejected.

***Correspondence Information***

Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner, Joseph P. Hirl, whose telephone number is (703) 305-1668. The Examiner can be reached on Monday – Thursday from 6:00 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anil Khatri can be reached at (703) 305-0282.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,  
Washington, D. C. 20231;

or faxed to:


(703) 746-7239 (for formal communications intended for entry);

or faxed to:

(703) 746-7290 (for informal or draft communications with notation of "Proposed" or "Draft" for the desk of the Examiner).

Hand-delivered responses should be brought to:

Receptionist, Crystal Park II  
2121 Crystal Drive,  
Arlington, Virginia.

  
PAUL P. GORDON  
PRIMARY EXAMINER

Joseph P. Hirl



June 27, 2003